

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for synthesis of polypeptides or polynucleotides *in vitro*, the method comprising:

synthesizing polypeptides or polynucleotides in a reaction mix substantially free of polyethylene glycol, comprising:

an extract from bacterial cells;

magnesium at a concentration of from about 5 mM to about 20 mM;

~~in~~ the absence of an exogenous high energy phosphate source;

wherein oxidative phosphorylation is activated in said reaction mix.

2. (canceled)

3. (previously presented) The method of Claim 1 wherein said synthesis comprises transcription of mRNA from a DNA template.

4. (previously presented) The method of Claim 1, wherein synthesis of said polypeptides or polynucleotides is at least two fold higher than synthesis in the absence of said oxidative phosphorylation.

5. (previously presented) The method according to Claim 1, wherein synthesis of said polypeptides or polynucleotides is at least three fold higher than synthesis in the absence of said oxidative phosphorylation.

6. (previously presented) The method of Claim 1 wherein said synthesis of polypeptides or polynucleotides is performed as a batch reaction.

7. (previously presented) The method of Claim 1, wherein said synthesis of polypeptides or polynucleotides is performed as a continuous reaction.

8-12. (canceled)

13. (currently amended) A method for ~~*in vitro*~~ synthesis of polypeptides or polynucleotides *in vitro* ~~in a reaction mix comprising a biological extract comprising components of polypeptide synthesis machinery, wherein such components are capable of expressing a nucleic acid encoding a desired polypeptide,~~ the method comprising:

synthesizing said polypeptides or polynucleotides in a reaction mix substantially free of polyethylene glycol, comprising:

~~an extract from *E. coli* grown in glucose containing medium~~ an extract from bacterial cells comprising components of polypeptide synthesis machinery, wherein such components are capable of expressing a nucleic acid encoding a desired polypeptide,

magnesium at a concentration of from about 5 mM to about 20 mM;

the absence of an exogenous high energy phosphate source;

at least one of spermine or spermidine at a concentration of at least about 1 mM;

~~and is substantially free of polyethylene glycol;~~

wherein oxidative phosphorylation is activated in said reaction mix.

14- 21 (canceled)

22. (previously presented) The method of Claim 13, wherein said synthesis further comprises transcription of mRNA from a DNA template.

23. (previously presented) The method of Claim 13 wherein said synthesis is performed as a batch reaction.

24. (previously presented) The method of Claim 13, wherein said synthesis of polypeptides is performed as a continuous reaction.

25. (previously presented) The method of Claim 13, wherein said *E. coli* are grown in glucose and phosphate containing medium.

26. (canceled)

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Add the following new claims:

27. (new) The method according to Claim 13, wherein said *in vitro* synthesis of polypeptides does not require the addition of a secondary energy source.

28. (new) The method according to Claim 13, wherein said *in vitro* synthesis of polypeptides is performed in the absence of an exogenous high energy phosphate source.

29. (new) The method of Claim 13 wherein said synthesis comprises transcription of mRNA from a DNA template.